Cycling and Health

THIS BRIEFING COVERS

- Headline messages; CTC view
- Key facts and arguments: the health crisis; cycling as active travel; benefits of cycling; risks v benefits; cycling and injury to other road users; health and transport – making the links; safety equipment for cyclists.
- Further reading and references

This briefing summarises the evidence for the health benefits of physical activity in general and cycling in particular. It also advises on what actions can be taken to maximise these benefits in the UK by organisations and individuals working in the health sector, with a particular focus on the opportunities arising from the recent restructuring of public health in England.

It should be read in conjunction with other CTC briefings, notably on cycling and road safety, local transport policy, cycle-friendly design and planning, and the targeted promotion of cycling for various groups and communities through ‘smarter choices’ measures.

See www.ctc.org.uk/campaigns > views

HEADLINE MESSAGES

- Cycling is excellent exercise. More cycling will help more people meet the recommended physical activity guidelines, improve their physical and mental health and well-being, while reducing their risk of premature death and ill-health.
- Cycling is far more likely to benefit an individual’s health than damage it; and the more cyclists there are, the safer cycling becomes – the ‘safety in numbers’ effect.
- Cycling fits into daily routines better than many other forms of exercise, because it doubles up as transport to work, school or the shops etc. It’s easier than finding extra time to visit the gym and far less costly.
- Lack of exercise can make people ill. It can lead to obesity, coronary heart disease (CHD), stroke, cancers, type 2 diabetes and other life-threatening conditions.
- Obesity in particular is a growing, costly burden to the health service. Without action, 60% of men, 50% of women and 25% of children will be obese by 2050 in the UK.
- CHD is the UK’s biggest killer – well over 90,000 people die of it each year with over 33% of these attributable to lack of physical activity.
- Unlike driving, cycling causes negligible harm to others, either through road injuries or pollution, so it’s a healthy option not just for cyclists, but for everyone else too.
CTC VIEW

- **Policy makers should recognise cycling as a healthy and convenient means of transport and recreation that could be incorporated into the ordinary day-to-day activity of millions of adults and children and so improve health and quality of life.**
- **There is good evidence that cycling’s health benefits far outweigh the risks involved and that the more people who cycle, the safer it becomes – the ‘safety in numbers’ effect.**
- **Cycling is also a benign mode of transport, causing negligible harm to others. Hence a switch from motorised travel to cycling would improve road safety for all by reducing road danger.**
- **Public health and transport/planning policies, strategies and guidance, locally and nationally, should be mutually supportive in promoting and facilitating cycling as active travel; and they should clearly steer professionals towards cross-sector working. This will help tackle the serious, costly and growing crisis of physical inactivity and the health problems associated with it (e.g. obesity, heart disease etc).**
- **Directors of Public Health (England) should take advantage of their planned return to local authorities to engage transport, town and spatial planning and other council departments (e.g. leisure and tourism) more closely in promoting cycling as active travel and recreation.**
- **The NHS and its providers should actively promote cycling both to their own employees, to the people in their care, and to the general public; and they should invest in measures to support it (e.g. patient referral schemes, cycling facilities at sites as part of Travel Plans etc).**
- **Transport and planning decisions should undergo a ‘health check’ to maximise the potential for positive impacts on active travel and minimise negative impacts. Tackling hostile road conditions is a priority because they put existing cyclists at risk and deter many others including children and young people.**
- **Placing the onus solely on cyclists to protect themselves from injury does not tackle the risks they face at source. Health professionals should therefore remain cautious about cycle safety campaigns that focus on personal protective equipment.**

KEY FACTS AND ARGUMENTS

Sections 1 – 4 of this briefing summarise the relationship between physical activity (and cycling specifically), health and road safety. For a fuller overview see Cycling England’s *Cycling and Health: What’s the Evidence* (2007): [www.ciltuk.org.uk/download/Cycling_Health_Full_Report.pdf](http://www.ciltuk.org.uk/download/Cycling_Health_Full_Report.pdf)

1) The health crisis
   a. **Obesity:**
      • In 2010, the *Health Survey for England* (2010)¹ found that 26% of both men and women were obese, as were 17% of boys and 15% of girls aged 2-15. Obesity rates among children have fallen from a peak in 2006, but are still higher than in 1995. Conversely, adult obesity rates continue to rise: the survey notes that “…obesity in men and women in 2010 was at its highest level since 1993”, when 16% of women and 13% for men were classified as obese (42% of men and 32% of women were overweight). The Survey notes that “Overweight and obesity are associated with cardiovascular risk and cardiovascular-related mortality. Obesity is also associated with cancer, disability during older age and decreased life expectancy…”
      • In 2007, the Government-commissioned Foresight report² predicted that, without action, 60% of men, 50% of women and 25% of children would be obese by 2050 in the UK.
      • In adults over 40 years of age, obesity can shorten life expectancy by 6-7 years.³
      • The Government’s White Paper on public health (November 2010)⁴, noted that “Britain is now...”
the most obese nation in Europe”. Its subsequent ‘call to action on obesity’ contains further data on both the scale and the societal costs of the obesity epidemic. For more on the measures proposed in these documents for promoting physical activity and tackling obesity, see p10.

b. Cardiovascular disease (CVD)/ Coronary heart disease (CHD)
- Heart and circulatory disease is the UK’s biggest killer.
- In the UK, in 2008: over 191,000 people died from heart and circulatory disease including 88,000 deaths from CHD; and CVD caused 50,000 premature deaths.

c. Type 2 diabetes
- Approximately 2.8 million people in the UK suffer from type 2 diabetes.
- Type 2 diabetes is often associated with obesity.

d. Physical inactivity/sedentary behaviour:
- Fewer than half (45%) of men in Scotland meet the recommended levels of physical activity, compared to 39% in England, 37% in Wales and 33% in N Ireland. Women were less active than men in all UK countries with 33% reporting meeting recommended levels in Scotland, 29% in England, 24% in Wales and 28% in Northern Ireland.
- A survey on physical activity in Wales found that in 2010 around a third of adults reported 0 active days in the past week.
- It is estimated that 37% of CHD deaths are related to physical inactivity.
- Physical inactivity is a cause of breast and colon cancer, and accountable for 27% of type 2 diabetes world-wide.
- Sedentary behaviour is associated with an increased risk of type 2 diabetes, cardiovascular disease and death from all causes.

In 2011, the UK Chief Medical Officers (CMOs) recommended that adults should achieve at least 150 minutes of at least moderate intensity physical activity a week and recognise the comparable benefits of achieving 75 minutes of vigorous intensity activity. The CMOs also recommended that children and young people should achieve a total of at least 60 minutes of at least moderate intensity physical activity each day. Cycling to work, school or the shops is a convenient way of achieving this level of exercise or, at least, contributing towards it.


e. Asthma, bronchitis and other respiratory diseases:
- Car dependency contributes to air pollution, which leads to an estimated 35,000 premature deaths in the UK every year. Many of these are due to asthma, bronchitis and other respiratory diseases - all of which are aggravated by exposure to car fumes.
f. The economic impact:

- Research commissioned by the Department of Health found (DoH) that, on average, physical inactivity cost each Primary Care Trust (PCT) in England £5 million a year (primary and secondary care costs attributable to physical inactivity, based upon 2006/07).\(^\text{14}\)
- The Foresight report\(^\text{15}\) projected that NHS costs attributable to overweight and obesity would double to £10 billion per year by 2050, if nothing is done to tackle it. It estimated that the wider costs to society and business would reach £49.9 billion per year (at today's prices).
- In 2006, CVD cost the UK health care system around £14 billion. In the same year, production losses due to mortality and morbidity associated with CVD cost the UK over £8.2 billion.\(^\text{16}\)

2) Cycling as active travel

CTC view: Policy makers should recognise cycling as a healthy and convenient means of transport and recreation that could be incorporated into the ordinary day-to-day activity of millions of adults and children and so improve health and quality of life.

a. The health benefits of physical activity

- The 2009 annual report by the then Chief Medical Officer says: “The potential benefits of physical activity to health are huge. If a medication existed which had a similar effect, it would be regarded as a ‘wonder drug’ or ‘miracle cure’.”\(^\text{17}\)
- Launching The Global Recommendations on Physical Activity for Health\(^\text{18}\), the World Health Organisation says: “…regular physical activity reduces the risk of coronary heart disease and stroke, diabetes, hypertension, colon cancer, breast cancer, osteoporosis, and depression. Additionally, physical inactivity is a key determinant of energy expenditure, and thus is fundamental to energy balance and weight control.”
- People who are physically active reduce their risk of developing coronary heart disease, stroke and type II diabetes by up to 50%.\(^\text{19}\)
- In Europe, 10.4% of all premature deaths would be prevented if everyone who is currently inactive became active.\(^\text{20}\)
- Physical activity has a beneficial effect on mental health and psychological well-being and it helps treat clinical depression, anxiety and stress. In 2004, the Chief Medical Officer said: “Physical activity can be considered both for its preventive and its therapeutic effects on mental illness, and also for its impact on mental health in the general population.”\(^\text{21}\)
- Research has shown that bouts of physical activity may help children pay more attention at school.\(^\text{22}\) There is also a significant positive relationship between physical activity, improved cognitive performance and academic achievement.\(^\text{23}\)

b. The advantages of cycling as a form of physical activity

Cycling is close to being an ideal form of exercise because:

- It doubles up as transport, which means that most people can readily incorporate it in their daily lives. It avoids the need to spend both time and money on activities such as gym membership - indeed, it can save both compared with alternative means of transport. Maintaining the habit of regular physical activity is easier if it is incorporated into day-to-day activities.
- It contributes to fat loss, disposing of around 5 calories a minute.
- It is aerobic – it uses major muscle groups (in the legs) and causes the heart rate and respiration to increase in order to supply the muscles.
Cycling takes the body’s weight off the legs, exerting much less pressure on the joints than in running, for example. It is therefore a good form of exercise for people with joint problems.

It is a low skill activity (by contrast with dancing or most sports, for example). Although the prospect of cycling on Britain’s roads may appear challenging to a non-cyclist, it is essentially an enduring and quickly learnt ability. National Standard training is readily available (see www.bikeability.org.uk).

For those who find sports orientated or recreational activity off-putting, commuter cycling, or cycling to school or the shops, may be an acceptable and convenient alternative.

Cycling can take people out into green space and the countryside – being in a ‘green’ environment has itself been shown to have health benefits.

It is a low cost form of exercise, accessible to most people.

National clinical guidelines recommend cycling as a physical activity that is beneficial for children’s health.

c. Evidence for the health benefits of cycling:

People who cycle regularly in mid-adulthood typically enjoy a level of fitness equivalent to someone 10 years younger and their life expectancy is two years above the average. (The latter finding is also borne out by an unpublished analysis of CTC members’ obituaries).

A population-wide study in Copenhagen found that, compared with those who cycled regularly to work, people who did not do so had a 39% higher mortality rate, regardless of whether or not they sometimes took part in other physical activities at other times.

Cycle commuting improves fitness in men and women and is inversely associated with body mass index (BMI - a measure of whether someone is a healthy weight for their height), obesity, triglyceride levels, blood pressure, and insulin level in men.

A Dutch study found that employees who cycle regularly to work are less frequently ill, with on average more than one day per year less absenteeism than colleagues who do not cycle to work. The authors calculated that between them employers in the Netherlands could save around 27 million Euros in terms of absenteeism if they encouraged more people to cycle.

Over a period of nine years, a study of male civil servants found that those who cycled for at least an hour a week (or 25 miles in a single week) experienced less than half the non-fatal and fatal coronary heart disease of the others.

Another UK study found that people who took up cycling as a new activity gained the greatest benefits at the outset, but fitness continued to improve as they increased their cycle use. Reduced body fat was also noted, particularly among those who were overweight or obese at the outset of the trial.

A study predicting the consequence of 100,000 people taking up regular cycle commuting calculated that 50 fewer deaths would result per year (health benefits and reduced road casualties aggregated), the equivalent of 1,660 life years.

Boys aged 10-16 who cycle regularly to school are 30% more likely to meet recommended fitness levels, while girls who cycle are 7 times more likely to do so.

A study that examined data for 14 countries, all 50 US states and 50 of the largest US cities, found that walking and cycling help tackle physical inactivity, obesity and diabetes.

One study that looked at the benefits of a shift from car to active transport concluded that the health benefit due to physical activity is by far the biggest positive and that “the benefits of bicycling completely overwhelm any concern over pollution exposure of bicyclists.”

Research based on Cycling England’s Cycling Cities and Towns suggests that the most significant benefits from cycling are likely to come from interventions targeted at the 19% of the
population who are currently not getting enough exercise and for whom, importantly, there are likely to be relatively fewer barriers in the way of taking up the activity (the remaining 81% are already physically active enough, or have a low probability of ever cycling regularly). This does not mean, of course, that efforts to persuade the latter to cycle should be dismissed.

Assessing the benefits – the Health Economic Assessment Tool for Cycling (HEAT)

HEAT, a free on-line tool from the World Health Organisation, helps calculate how much cycling saves from reductions in mortality. It can be used to assess the value of existing cycle use, or what the benefits might be for an increase in cycling on a particular route/area. The health benefit is calculated entirely on the conclusions of the Copenhagen Heart Study, specifically the reduction (by a factor of 0.72, or 28%) in all cause mortality rates for those who cycle to work regularly compared to those who do not – see: www.ncbi.nlm.nih.gov/pubmed/16575269

(N.B. The above ratio can also be expressed by stating that “people who do not cycle-commute regularly have a 39% higher mortality rate than those who do” – see p5).

To assess the economic impact of current cycling levels in a town/region/country you will need: the number of cycle trips; the average cycle trip distance; the value of a life (currently valued at £1,653,687 in the UK) and, if possible, the proportion of the working age population that dies each year. Based on the number of trips made and using an average of around 124 trips per average cyclist per year, the tool calculates the health effect on the working age population. It is also possible to forecast future benefits from achieving a substantial increase in cycling. www.euro.who.int/HEAT

3) Risk v benefits of cycling and ‘safety in numbers’

CTC view: There is good evidence that cycling’s health benefits far outweigh the risks and, indeed, that more people who cycle, the safer it becomes – the ‘safety in numbers’ effect.

Some people are concerned that the effect of promoting cycling for health puts people in danger because they believe that cycling is a high-risk pursuit. However, as we have seen, regular cycling reduces mortality rates and increases life expectancy by two years on average. Indeed, the latest edition of Health on the Move from a group of public health and transport practitioners, says that cycling is not an exceptionally high-risk activity and that it “... has great potential to assist public health programmes and reduce road danger.” This point has long been recognised. In its 1992 report, Cycling: Towards Health and Safety, the British Medical Association concluded that “Even in the current hostile traffic environment, the benefits gained from regular cycling are likely to outweigh the loss of life through cycling accidents for the current population of regular cyclists.”

The author of this report, Mayer Hillman, subsequently estimated that the life years gained due to the health and fitness benefits of cycling in Britain outweighed the life-years lost through injuries by a factor of around 20:1, a figure now endorsed by the UK Government.

Several more recent studies have also weighed up the health costs and benefits of cycling. Unlike Hillman’s calculation, these take account of the pollution risks (as well as the injury risks) faced by cyclists. (N.B. There is uncertainty about the adverse effect of pollution: it appears that this
significantly depends on the cyclist’s speed and hence their breathing rate – for more see CTC’s forthcoming briefing on air pollution). However, if pollution effects are omitted, the health benefits are estimated to outweigh the injury risks by between 13:1 and 415:1 (see table below).

<table>
<thead>
<tr>
<th>Authors (date)</th>
<th>Location(s)</th>
<th>Basis for comparison</th>
<th>Headline findings</th>
<th>Benefit : disbenefit</th>
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<tbody>
<tr>
<td>Hillman (1992)(^{44}) (not online)</td>
<td>Great Britain</td>
<td>Ratio of life-years gained through health benefits of cycling v life years lost to cycling injuries</td>
<td>Health related life-years gained outweigh injury-related life-years lost by 20:1</td>
<td>20:1</td>
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| De Hartog et al (2010)\(^{45}\) | Netherlands | Gains and losses per person per annum for adults aged 18-64 who switch a regular car commute to cycling. Weighs up life-years gained per year through health benefits of cycling, versus life years lost to cycling injuries and pollution. | Average mortality gains/losses: \(^{46}\)  
- Physical activity benefits: range 3-14 months, ave. 8 months (c245 days)  
- Injury disbenefits: range 5-9 days (ave. 7 days)  
- Pollution disbenefits: range 0.8-40 days, ave. 21 days) | 245:7 = 35:1  
N.B. with pollution disbenefits to individuals, = c9:1, but this omits pollution benefits to society |
| Woodcock et al (2009)\(^{47}\) | London (the study also considers Delhi) | Various sustainable travel scenarios, one of which (“increased active travel”) is a doubling of walking and an 8-fold increase in cycling, with corresponding reductions in car use. Weighs up both mortality effects and “disability adjusted life years” (DALY) effects per million of population due to increased physical activity, injuries and pollution; also the societal benefits of reduced pollution and CO2 emissions. | Impacts per million population annually under the “increased active travel” scenario in London:\(^{48}\)  
- Physical activity benefits: 528 deaths averted, saving 5496 life-years; plus a reduction of 2245 life-years impaired by disability, a saving of 7742 DALYs.  
- Air pollution net benefits (n.b. societal benefits of reduced air pollution outweigh the pollution disbenefits for individuals who switch from car to active travel): 21 deaths averted, saving 200 life-years, plus 200 DALYs.  
- Traffic crashes: net loss of 11 lives and 418 life-years, plus an increase of 101 life-years impaired by disability, a cost of 519 DALYs. | Ratio for mortality: 5496 : 418 = 13:1  
Ratio for DALYs: 7742 : 519 = 15:1  
(N.B. Including pollution effects to individuals and society makes little difference to these ratios). |
Estimates of the health benefit of cycling: injury reduction disbenefit (Cont.)

| Data from several EU cities | Considers annual value of mortality benefits and disbenefits for each individual who switches a regular short (5km one-way) car commute to cycling. Weighs up life-years gained per year through health benefits of cycling, versus life years lost to cycling injuries and pollution, also societal benefits of reduced pollution. | Ave. annual value of benefits per person switching from car to cycle:
- Physical activity benefits, $1310
- Public health benefits from reduced pollution, $33
- Individual disbenefits from increased pollution, $19
- Individual disbenefits from injuries, $53.
See Table 5 of report. | 1310 : 53 = 24:1 (N.B. ratio including pollution effects to individuals and society is c19:1). |

| Barcelona | Calculates the overall mortality-related impacts of Barcelona’s “BICING” hire-bike scheme in terms of life-years gained through health benefits of scheme-users switching from car travel to cycling, versus life years lost to cycling injuries and pollution. Also considers CO2 savings. | Life years gained and lost annually by BICING scheme users:\n- Deaths averted due to physical activity, 12.46\n- Deaths due to pollution: 0.13\n- Deaths due to injury: 0.03. | 12.46 : 0.03 = 415:1 (N.B. ratio including pollution effects to individuals is 77:1. Pollutant effects to society not assessed). |

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Rabl & de Nazelle (2012)
Rojas-Ruede et al. (2011)
Safety in Numbers
A growing body of evidence suggests that cyclists gain from ‘safety in numbers’ i.e. increased cycle use is associated with a lower risk per km cycled.\(^{52}\) It has also been estimated that a doubling of cycle use would result in only a 25-30% increase in cycle fatalities, representing a 35-40% reduction in risk per cyclist.\(^{53}\)

The causal mechanism for this has not been established, but a likely explanation is that drivers grow more ‘cycle aware’ when there are more cyclists on the road. It may also be that increased cycle use means that a greater proportion of the driving population will also be cycle users, who will have a better understanding of how to drive with respect for cyclists’ safety – a phenomenon established by research.\(^{54}\) The safety in numbers effect is even stronger where conditions for cycling have improved, and/or traffic speeds reduced – London, York and Leicester are both among several European towns and cities that have increased cycle use while at the same time reducing casualties in absolute terms.

For more on ‘safety in numbers’ and the evidence for it, see [www.ctc.org.uk/safetyinnumbers](http://www.ctc.org.uk/safetyinnumbers)

4) Cycling and injury to other road users

**CTC view:** Cycling is a benign mode of transport, causing negligible harm to others. Hence a switch from motorised travel to cycling would improve road safety for all by reducing road danger.

Compared to motor vehicles, cyclists put others at negligible risk. Cycling is not responsible for emissions that lead to and exacerbate respiratory disease, and cyclists cause very few injuries to other road users:
- In 2010, the vast majority – 99% – of KSI (killed or seriously injured) pedestrians in urban areas – i.e. areas where pedestrians are most likely to be – were the result of a collision with a motor vehicle.\(^{55}\)
- Out of the 11,716 car/pedal cycles collisions in Britain in 2010, no car occupants died.\(^{56}\)

For more facts see: CTC’s *Cycling and Road Safety: an overview*; and *Cycling and Pedestrians*, both at [www.ctc.org.uk/campaigns](http://www.ctc.org.uk/campaigns) > views
5) Health and transport: making the links

**CTC view:**

- Public health and transport/planning policies, strategies and guidance, locally and nationally, should be mutually supportive in promoting and facilitating cycling as active travel; and they should clearly steer professionals towards cross-sector working. This will help tackle the serious, costly and growing crisis of physical inactivity and the health problems associated with it (e.g. obesity, heart disease etc).
- Directors of Public Health (England) should take advantage of their planned return to local authorities to engage transport, town and spatial planning and other council departments (e.g. leisure and tourism) more closely in promoting cycling as active travel and for recreation.
- The NHS and its providers should actively promote cycling both to their own employees, to the people in their care, and to the general public; and they should invest in measures to support it (e.g. patient referral schemes, cycling facilities at sites as part of Travel Plans etc).

The concept of ‘active travel’ has evolved over the past few years in response to the damage that physical inactivity is doing to public health. ‘Joined up’ health and transport policies/strategies are reflecting this, but more needs to be done to make sure that the link is consistently forged, and action taken to reinforce it, at both national and local level; and that the barriers that stop people from cycling are tackled with cross-sectoral expertise.

### a. Public health policy and new organisational structures (England): an overview

The coalition Government has given a good deal of priority to the promotion of public health (i.e. to policies aimed at preventing ill health and injury, as distinct from their treatment). Its 2010 Public Health White Paper *Healthy Lives, Healthy People* proposed new legislation to devolve a good deal of responsibility for public health from the NHS to local authorities, with Directors of Public Health (DsPH) being employed by local authorities. The *Health and Social Care Act 2012*, which resulted from this White Paper, is described more fully below.

The Paper noted that “Active travel and physical activity need to become the norm in communities”. It has since been supported by:

- A *Public Health Outcomes Framework 2013-16* sets out the overarching outcomes to which the Government wishes DsPH to contribute in delivering the public health agenda at the local level, and how progress will be measured in a publicly transparent manner.
- *Start active, stay active* updates guidelines on recommended levels of physical activity for people in different age groups. For instance, it recommends that adults aged 19-64 should undertake 150 minutes of moderate physical activity per week. Cycling is listed as one way of achieving this level.
- A *Call to action on obesity (2011)* outlines a new approach to tackling the problem by: moving beyond the focus on children towards a life course approach; enabling preventive action and ensuring support for those who need it; putting individuals at the heart of the new approach; rebalancing efforts to strengthen local action; giving partners the best possible opportunity to play their part; and improving the evidence base. An update (July 2012) explains changes in responsibilities and reviews the actions taken by the DoH so far.
In terms of direct policy links between cycling and health, the previous Government’s *Active Travel Strategy* (2010) linked physical activity very firmly indeed with travel, seeking to maximise the benefits of cycling while tackling the barriers and deterrents. It identified a number of delivery channels, including the health sector, developers and planners. At the time of writing, it remains on the Department of Health website.

### b. Transport and planning policy: the role of health professionals

Public health professionals have long recognised the importance of promoting active travel. In 2008, the ADPH launched its manifesto *Take Action on Active Travel* with input from CTC, Sustrans and others. The manifesto was supported by over 100 health, environmental, safety and other organisations, including all the major bodies involved in public health.

The manifesto set out the measures that decision makers at all levels (UK, devolved governments, regional and local authorities) should take “to bring about a population-wide shift from sedentary travel to walking and cycling”, including:

- ambitious targets for a growth in walking and cycling & ensuring they are met
- realistic investment – 10% of transport budgets
- safe, attractive walking and cycling conditions
- making 20mph or lower speed limits the norm for residential streets
- tackling bad driving
- ‘health checking’ every transport and land use decision


#### • England

The *Health and Social Care Act 2012* (England) created the framework for major reform of the NHS, with much of it taking effect from April 2013. The Act devolves significant responsibility for public health from national to local government, albeit with a Cabinet Sub-committee on Public Health to provide cross-departmental strategic leadership. Ideally, this will lead to closer working partnerships between local health and transport/planning professionals, and with local voluntary and community groups. Measures to encourage people to try out alternatives to driving – or ‘smarter choices’ (e.g. cycle training programmes, individualised travel planning, events, workplace challenges etc) – lend themselves particularly well to this ground level, cross-sector approach. For more on Smarter Choices see [www.ctc.org.uk/campaigns > views.](http://www.ctc.org.uk/campaigns)

**Public Health England:** Under the Act, a new executive agency, Public Health England, will coordinate activity nationally. It will provide leadership and deliver integrated services to protect the public’s health, incorporating the National Obesity Observatory and taking over many of the functions currently provided by the Public Health Observatories and the National Treatment Agency. It will lead on the collection and publication of data to show whether the aims of the *Public Health Outcomes Framework* are being met (see p10).

**Healthwatch England** is the new consumer champion for both health and social care. It will exist at both local and national level. **Local Healthwatch** will be an independent organisation giving citizens and communities a stronger voice to influence and challenge care services in their area. This is an opportunity for local champions of cycling to help promote active travel in their neighbourhood for its health benefits.
English local authorities: the Health and Social Care Act requires local authorities to promote and provide for healthy living “whether by helping individuals to address behaviour that is detrimental to health or in any other way. They will discharge this responsibility through the local DPH (who will become a council employee, together with his/her staff), in conjunction with a Health and Wellbeing Board. The Board’s role will be to understand their community’s needs, agree priorities and encourage people who commission health services to work in a more joined up way. Besides the DPH, other Board members will include a local Healthwatch representative and councillors, and they will be free to expand their membership to the charity or voluntary sectors.

The Boards will undertake a Joint Strategic Needs Assessment (JSNA) which will drive local commissioning and they will also develop a Joint Health and Wellbeing Strategy (JHWS) on how these needs can be best addressed. Boards will be under a statutory duty to involve local people in the preparation of their JSNAs and JHWSs.

The JSNA process has the potential to bring health, transport and planning professional together to work for the benefit of public health. However, the draft guidance to Health and Wellbeing Boards on which the Government is currently consulting (August 2012), does not clearly direct public health teams to do this. This is a serious failing, given the importance that health professionals themselves attach to the need for support from other sectors – particularly in transport and planning – to encourage active travel. CTC and others believe, therefore, that the final guidance should be revised to take this into account.

• Scotland, Wales and Northern Ireland

The reforms made by the Health and Social Care Act 2012 apply almost exclusively to England, because the management of the health service in Scotland, Wales and N Ireland is devolved.

However, the principle that all health boards/trusts throughout the UK should work in close partnership with those responsible for making decisions about local transport and planning, is vital everywhere. This is the best way to help the public engage in healthy, active travel.

The connection between cycling and walking and health has been officially recognised in a variety of official documents produced by the devolved administrations. For example, the Cycling Action Plan for Scotland (2010) benefitted from various recommendations from the Active Travel report from the Scottish Government’s Committee on Transport, while Scotland’s obesity strategy (2010) commits the Government to “create environments that make walking and cycling part of everyday life for everyone…”

In 2012, the Scottish Parliament Information Centre (SPICe) produced a short briefing on cycling as a form of transport in Scotland, including a summary of cycling policy. In the same year, a partnership of sustainable transport groups set out their vision for Scotland, in Active Travel, Active Scotland, aimed at all levels of government.

In Wales, the Assembly’s physical activity strategy, Creating an Active Wales (2009) highlights the strong links with its Walking and Cycling Action Plan 2009 – 2013, which includes an aim to “Improve the health and well being of Wales through increased physical activity”. However, while the Assembly’s 5-year vision for the NHS in Wales, Together for Health, stresses the need for integration and partnership working, it does not mention the transport or planning sector.
Northern Ireland’s strategy to combat overweight and obesity looks at cross-sectoral action and ‘delivery partners’, and concludes that “One example of this synergy and inter-relatedness between different policies is how a combination of urban design, land use patterns, and transportation systems promotes walking and cycling, which helps create active, healthier, and more liveable communities. It is therefore vital that those with an influence on these wider sectors are part of the process, and buy into the need to deliver on this agenda.”

For more about the structures, policies and strategies of the NHS in devolved UK countries see:
- www.scotland.gov.uk/Topics/Health/NHS-Scotland
- www.wales.nhs.uk/
- www.n-i.nhs.uk/

**NICE (National Institute for Health and Clinical Excellence)**
The *Health and Social Care Act 2012* (see above) sets out a new responsibility for NICE to develop quality standards and other guidance for social care in England. Set up in 1999, NICE already produces evidence-based guidance on medical care and the best ways to encourage healthy living, promote wellbeing and prevent disease. In recent years, it has been developing a series of public health briefings relating to physical activity and injury prevention for children and adults, including both behavioural and environmental interventions.

NICE recommends cycling as an effective intervention to increase physical activity. Amongst its ‘Four commonly used methods to increase physical activity’, for example, it advocates exercise referral schemes and “community-based exercise programmes for walking and cycling.”

An appendix to the BMA’s report on transport and health (see p16) summarises relevant NICE recommendations, and NICE also now lists briefings that are particularly relevant for local government at [www.nice.org.uk/localgovernment/PublicHealthBriefingsForLocalGovernment.jsp](http://www.nice.org.uk/localgovernment/PublicHealthBriefingsForLocalGovernment.jsp)

NICE guidance is used throughout the UK, but some of it is disseminated in devolved countries following a local review.

**Directors of Public Health (DsPH)**
As previously noted, English DsPH and their staff are to work within local authorities to help them discharge their public health functions, putting them in a strong position to engage more effectively with transport, planning and other departments.

CTC recommends that DsPH efforts to promote active travel focus on the following areas:
- Influencing key local transport and planning policies, plans and assessment processes to ensure they are ‘health-checked’ (see p15);
- Promoting or supporting the promotion of active travel for the population in their areas and specifically for key target groups: school pupils, employees, health patients, people with disabilities, other disadvantaged groups and communities;
- Monitoring the impact of transport/active travel policies on physical activity and public health;
- Promoting physical activity to the NHS’s own employees, as well as its patients;
- Ensuring that hospitals and other health services are easily accessible by active travel, with safe and convenient cycle access, parking etc.
NHS
With c1.5 million employees, the NHS is the largest employer not just in Britain but in the whole of Europe. It has an obvious interest in promoting healthy travel, both to the public and to its staff.

It also recognises that climate change could be a serious threat to health, so the NHS (England) has committed to reduce its carbon footprint by 60% by 2050, travel being a target area. The NHS Sustainable Development Unit has been set up to help the NHS fulfil its potential as a sustainable and low carbon healthcare service. It promotes cycling and walking both as physically active travel and as sustainable forms of transport.

For more on how the NHS can promote cycling to staff, the public and to the people in their care, see CTC’s guide Promoting Cycling in the Health Sector at www.ctc.org.uk > articles

Active travel initiatives:

- The **Active Travel Consortium** brings together walking, cycling and health organisations to promote physical and mental health through active travel. Funded by the Big Lottery Fund’s Well-being Fund, it focuses upon sedentary and traditionally hard-to-reach audiences who have the greatest potential for change and the biggest health gains. It supports 50 England-wide practical projects, including cycling on referral schemes and taking cycling into schools. [www.sustrans.org.uk/resources/in-the-news/travel-actively-into-the-future](http://www.sustrans.org.uk/resources/in-the-news/travel-actively-into-the-future)

- **Change4Life** is a public health programme from the Department of Health, designed to encourage people to change their habits to stop them becoming overweight. Bike4Life is a subsidiary initiative, principally encouraging cycling as an enjoyable way to keep fit, for adults, children and families. [www.nhs.uk/change4life/Pages/change-for-life.aspx](http://www.nhs.uk/change4life/Pages/change-for-life.aspx)

- **Healthy Towns**: In 2008, the Government awarded nine English towns £30m to encourage residents to become more physically active, as part of the Change4Life programme. Cycling featured amongst some of the towns’ proposals (e.g. new signage in Portsmouth to help walkers, runners and cyclists time themselves when exercising [http://healthypompey.com/](http://healthypompey.com/)).
c. Health policy: the role of transport and planning professionals

CTC view: Transport and planning decisions should undergo a ‘health check’ to maximise the potential for positive impacts on active travel and minimise negative impacts. Tackling hostile road conditions is a priority because they put existing cyclists at risk and deter many others including children and young people.

Practitioners and politicians who make transport and planning decisions exercise a significant influence over the type of transport people choose for any given journey and, in turn, on how active and healthy their travel proves to be. Not only should these professionals and elected members work towards tackling hostile road conditions – caused, for example, by poor road layout, high speeds, lorries, or planning decisions that increase motor traffic volumes – but they should also ensure that cycling is a logical, convenient and attractive way of accessing local destinations/services (e.g. town centres, leisure facilities, employment centres, housing developments etc).

“[Local authorities should]…identify any aspect of transport policies which discourages children and young people from using modes of travel involving physical activity (such as walking or cycling). For example, policies that aim to keep traffic moving may make it difficult to cross the road. Consider how these policies can be improved to encourage physically active travel.”

NICE. Promoting Physical activity for children and young people. Jan 2009

• Promoting active travel

Cutting car use / traffic volume: A DfT commissioned review of the evidence on the links between transport, physical activity and health says that: “In order to increase levels of physical activity, it is necessary to reduce use of the car.” Replacing as many car journeys as possible by cycling and walking will not only help make people more active as part of their everyday lives, but also contribute to reduced traffic volumes, making cycling and walking more attractive.

Cycle-friendly infrastructure: the highway network and its junctions must be planned, designed and improved with cyclists in mind.

Lower speeds: high speed also deters people from cycling, so implementing lower speed limits, especially 20 mph in urban areas, is also vital.

Law enforcement: Policing and penalising bad driving is equally essential, so effective traffic law and enforcement has a major role to play too.

Smarter choices: as mentioned above, smarter choices encourage people to try out alternatives to driving - (e.g. cycle training programmes, individualised travel planning, events, workplace cycle challenges etc). Any funding that local authorities put towards these measures is well-spent.
Built environment: NICE has also produced evidence-based recommendations on how to improve the physical environment to encourage physical activity. They include:

- Ensure planning applications for new developments always prioritise the need for people to be physically active as a routine part of their daily life.
- Ensure pedestrians, cyclists and users of other modes of transport that involve physical activity are given the highest priority when developing or maintaining streets and roads.
- Plan and provide a comprehensive network of routes for walking, cycling and using other modes of transport involving physical activity.
- Ensure public open spaces and public paths can be reached on foot, by bicycle and using other modes of transport involving physical activity.

Health checks

In the interests of facilitating active travel, decision makers should introduce the practice of ‘health checking’ every transport and land use proposal to ensure that it will not impact adversely on active travel and, ideally, encourage it.

For more on cycle-friendly transport policy, road safety, and infrastructure, see www.ctc.org.uk/campaigns > views

“Active forms of travel, such as walking and cycling, are the most sustainable forms of transport and are associated with a number of recognised health benefits. [...] Walking and cycling are also effective ways of integrating, and increasing, levels of physical activity into everyday life for the majority of the population, at little personal or societal cost.

“The unintended consequence of increased car use has been the suppression of walking and cycling levels in the UK. With the increasing traffic density on UK roads, there has been a corresponding increase in risk of injury for pedestrians and cyclists. This has been coupled with a lack of investment in walking and cycling infrastructure. The decline in active travel has also resulted from poor urban design. Low-density land use patterns (such as urban sprawl) restrict accessibility to jobs, education, services and other destinations by active forms of travel. Even where destinations are geographically near, busy roads and poor infrastructure for active travel can lead to community severance. In many urban areas, travelling by car has become the easiest and safest option for accessing services, irrespective of journey length.

“The suppression of active travel in the UK is associated with generally higher levels of physical inactivity and sedentary lifestyles. This in turn can contribute to higher levels of morbidity and mortality through an increased risk of clinical disorders such as cardiovascular disease, overweight and obesity, metabolic disorders, and some cancers.”

6) Safety equipment for cyclists

**CTC view:** Placing the onus solely on cyclists to protect themselves from injury does not tackle the risks they face at source. Health professionals should therefore remain cautious about cycle safety campaigns that focus on personal protective equipment.

While health sector bodies naturally share a concern to prevent injuries from cycling, they should fully consider the possible negative impacts of cycle safety awareness campaigns. If not promoted carefully, they could easily have a net disbenefit for public health by deterring people from cycling.

If the health benefits of cycling outweigh the disbenefits by 20:1 (see section 6, p3), then a cycle safety campaign (e.g. to promote helmet wearing) would have a net disbenefit if it deterred more than one person from cycling for every 20 who continued (i.e. if it decreased cycle use by more than 4.7%), even if the safety intervention was 100% effective at preventing all cycling injuries. Obviously, the maximum threshold for avoiding a net public health disbenefit could be much lower if the safety intervention is only partially effective at reducing only a limited subset of cycling injuries (e.g. head injuries only).

For more on the public health impacts of promoting helmet wearing or moves to make it compulsory, see: [www.ctc.org.uk/campaigns](http://www.ctc.org.uk/campaigns) > views.

As mentioned above, tackling the causes of hostile road conditions at source helps protect cyclists from injury and encourages more people to take up cycling. This, combined with high quality cycle training, is far more effective than focusing on protective accessories for cyclists.

**FURTHER READING / WEBSITES**

- National Institute for Clinical Excellence (NICE) guidance:
- Sustrans’ information sheets on active travel [www.sustrans.org.uk/what-we-do/active-travel](http://www.sustrans.org.uk/what-we-do/active-travel)
ACKNOWLEDGEMENTS

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FOOTNOTES AND REFERENCES

3  NHS webpage on obesity. www.nhs.uk/conditions/obesity/pages/introduction.aspx
6  All these figures are from the British Heart Foundation’s Heart Stats. 2010. www.bhf.org.uk/publications/view-publication.aspx?ps=1001546
7  Facts from NHS webpage on diabetes. www.nhs.uk/conditions/Diabetes-type2/Pages/Introduction.aspx
Aspects. For example, they, not surprisingly, tended to know more about cycling facilities and how they operated. When thought (such as being ‘cut-up’ by a motor vehicle) . Reid, S et al, TRL. They could identify with such issues, as they knew that they were more commonplace than other non-cycl ing drivers. 

http://www.trl.co.uk/online_store/reports_publications/trl_reports/cat_road_user_safety/report_drivers_perceptions_of_cyclists.htm


Rabl A. Benefits of Regular Cycling, presented at Walk21 Satellite Symposium on transport-related physical activity and health, Magglingen, Switzerland.


Cavill, N and Buckland, J. Investigating the Potential Health Benefits of Increasing Cycling In the Cycling City and Towns. Published by DfT. April 2012. www.dft.gov.uk/publications/health-benefits-cycling-city/

THSG. Health on the Move 2011. www.healthandtransportgroup.co.uk/research/Ch_2_Active_transport_Cycling.pdf


DfT. Active Travel Strategy, P41

P41

Parliamentary answer (Earl Atlee). House of Lords Debates 13/10/10/. www.theyworkforyou.com/lords/?id=2010-10-13a.513.68

See note 38


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http://www.bmj.com/content/343/bmj.d4521#T2


A TRL study found that: “Whether a respondent cycled or not, not surprisingly, had an important effect on responses and attitudes. Those who were cyclists were in the favourable position of being able to see things from both the cyclist’s and the driver’s point of view […] those drivers who cycled did have greater insight than other drivers did in some aspects. For example, they, not surprisingly, tended to know more about cycling facilities and how they operated. When looking at the scenarios, they could rely more on personal experience and talk about how they had reacted in real life. They could identify with such issues, as they knew that they were more commonplace than other non-cycling drivers thought (such as being ‘cut-up’ by a motor vehicle).” Reid, S et al, TRL. Drivers’ Perceptions of Cyclists. 2003. http://www.trl.co.uk/online_store/reports_publications/trl_reports/cat_road_user_safety/report_drivers_perceptions_of_cyclists.htm


Ibid
Cycling and health

57 See note 4.
65 Top tier or unitary
75 NICE. Four commonly used methods to increase physical activity: brief interventions in primary care, exercise referral schemes, pedometers and community-based exercise programmes for walking and cycling. 2006. www.nice.org.uk/PHI002
77 NHS Sustainable Development Unit. Saving Carbon, Improving Health (Update 2010) www.sdu.nhs.uk/